

A key to the species of *Anisonyx*, with descriptions of three new species from the Natal Drakensbergen and one new subspecies from the Western Escarpment
(Coleoptera: Scarabaeidae: Hopliini)

by

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SYNOPSIS

Specific characters in the genus *Anisonyx* Latreille, 1807 (Coleoptera, Scarabaeidae) are discussed, and a new key to all the species, subspecies and forms is given. The following new South African species and subspecies are described: *A. alticola* n.sp., *A. montanus* n.sp., *A. setisquama* n.sp., *A. ditus* Pér. subsp. *splendens* n.ssp.

INTRODUCTION

In March 1959, B. R. and P. J. Stuckenberg collected Diptera in the Cathedral Peak Forest Reserve, Natal Drakensbergen, and handed over to the South African Museum, Cape Town, for determination, a lot of beetles collected on the same trip. Very little collecting had been done before in this region, especially at high level, and it is therefore not astonishing that a rather big proportion of the species found is neither represented in the collection of the S.A. Museum nor recorded in the Junk Catalogue, but are they new?

The position is clear only if a group has been revised lately and the author has seen the S.A. Museum's material, but three species of the genus *Anisonyx* Latr. not mentioned by Schein (1959) are certainly new. They all belong to Schein's second group (scales green, blue or violet), but for some time all my attempts to fit them into his key were unsuccessful, until I recognised the cause of the trouble: Schein says (p. 7) that in the species with blue or green scales the shape of the scales is a good specific character, but in his key he uses other differences, not always specific ones, while his description of the scales is rather short and incomplete; it is difficult to find a dividing line between "Scales bigger, as long as broad or only a little longer than broad" and "Scales smaller, much longer than broad", if neither the diameter nor the proportion of length to width is fixed. The only chance to obtain a clear division seems to be to measure the width of the scales.

The colour of the scales is at least partly produced by refraction or interference of light, daylight and artificial light may also produce different colours, and the hue may be considerably altered by light coming from a different angle; under these circumstances it is sometimes rather difficult to state the colour correctly.

The outline of the clypeus is always distinct, but the suture separating clypeus and frons is sometimes concealed by a dense brush of long hairs with scales inbetween which makes it impossible to measure the length.

Of the species treated by Schein *senilis* Burm., *badiitibialis* Schein, *brincki* Schein with ssp. *rudebecki* Schein and *bipilosus* Moser are unknown to me, and I do not know whether they are placed correctly. Of *badiitibialis* Schein says: "Similar only to *hilaris*", and the colour is certainly similar but clypeus and scales are different; colour alone is no indication of affinity and the shape of the clypeus is usually different in the sexes of one species, so I rather place a species in a group with similar shape and arrangement of scales than in one with similar colour. The length of pedicel and club in the male antenna is also only a specific, not a group character. In Schein's first group, *sesuto* Pér. differs from all the others not only by the arrangement but also by the shape of the scales, and I think it is better placed at the end of the group, and *lynx* F. next to *pseudomilitaris* Schein. If finally the species with scaly and scaleless forms or specimens are mentioned in both groups, it should in future be easier to put a new species in its proper place.

KEY TO THE SPECIES OF *Anisonyx* LATREILLE, 1807

- 1 (53) With red, golden yellow, green, blue, violet or whitish, opalescent scales, different in arrangement and density.
- 2 (17) Scales red or golden yellow.
- 3 (8) Scales cinnabar or scarlet.
- 4 (5) Red scales covering the whole elytra except a patch of varying extent around the black scutellum, also the pronotum partly and the whole propygidium, pygidium and abdomen. Legs black. With long, erect black setae, dense on scaleless, loose on scaly parts, hind femora with some long, erect white setae. Third tooth of anterior tibiae in ♂ distinct. 8-11 mm. Touwsrivier **ignitus** Castelnau, 1840.
- 5 (4) Red scales covering on elytra the declivous sides only from humeral callus to beyond the apical callus.
- 6 (7) In ♂ the lateral quarters of propygidium, the pygidium except the apex and the sides of the abdomen also covered with red scales, in ♀ small patches on the pronotum too. Third tooth of anterior tibiae in ♂ indicated by a small notch only. 9-10 mm. Worcester **militaris** Arrow, 1932.
- 7 (6) Pronotum, propygidium, pygidium and abdomen without red scales. Pedicel of antennae, fore and middle tarsi brownish, otherwise like former. 9-10 mm. Zwartbergen, Prince Albert distr. **pseudomilitaris** Schein, 1959.
- 8 (3) Scales golden yellow.
- 9 (16) Scales on elytra forming a submarginal stripe only or a subsutural one too, frons and legs without scales.
- 10 (13) Elytra with submarginal stripe only, pronotum of ♂ without, of ♀ with scales.
- 11 (12) Disc of elytra dark, fore tibiae, usually also apex of middle tibiae, fore and middle tarsi light piceous, all hairs black. In ♀ only, not in ♂, lateral third of pronotum in anterior half, pygidium and abdomen covered with scales. 9-9.5 mm. Table Mt. and Devil's Peak, upper parts **lynx** Fabricius, 1776.

- 12 (11) Disc of elytra fulvous, with thin, appressed fulvous hairs, erect hairs light grey on abdomen and femora, elsewhere mostly black. Pronotum with patches of scales in ♀ only, abdomen (sometimes hind femora too) with a few, pygidium with closely set scales in both sexes. 8-9 mm. Caledon distr.: Houwhoek, Steenbras River, Hottentot Holland Mts. **hessei** Schein, 1959.
- 13 (10) Elytra with submarginal and subsutural stripe.
- 14 (15) Pronotum without scales. Elytra light fulvous, suture dark, margins black. Clypeus narrower, more parallel in basal portion. Elytra less convex, with a row of long, erect, black setae along suture, long black hairs also on sides of head, upper and under side elsewhere with light grey hairs. 9.5 mm. Cape **senilis** Burmeister, 1844.
- 15 (14) Pronotum with 5 longitudinal stripes of scales. Elytra entirely pale greyish brown. Clypeus broader, attenuate from base to apex. Elytra more convex, with short, thin, appressed, brownish hairs; long, erect hairs partly black, partly white, the white hairs predominant in ♂ on apical half of upper and whole underside, in ♀ all over. Club of antennae shorter than pedicel in both sexes. Third tooth of anterior tibiae in ♂ only indicated, in ♀ usually strong. Fore and middle tibiae and all the tarsi brown. 9-10 mm. Caledon **gemmeus** Péringuey, 1902.
- 16 (9) Scales on elytra forming patches along suture and margin, there are also scales on head, pronotum, propygidium, pygidium, the whole underside and legs. Black, elytra dark piceous. Pubescence light fulvous, mixed on upper side with some dark hairs. Club of antennae shorter than pedicel, anterior tibiae with 2 teeth only in both sexes. Small, 6.8—7.5 mm. Basutoland; Royal Natal National Park **sesuto** Péringuey, 1908.
- 17 (2) Scales green, blue, violet or whitish, opalescent.
- 18 (50) Scales at least partly green, blue or violet.
- 19 (39) Scales at least partly big, round or moderately elongate, 0.06 mm. or more broad.
- 20 (29) Scales on elytra similar in shape and size to those on abdomen, spread out flat, the whole rim touching the underground, seldom the abdomen almost without scales.
- 21 (22) Apex of femora and all the tibiae and tarsi fulvous, scales fairly uniform in shape and size, about 0.1 mm. broad, up to 0.15 mm. long, in different shades of blue. 8-11 mm. **hilaris** Péringuey, 1902.
- 22 (21) All the tibiae black, usually the whole femora too.
- 23 (24) Hairs on underside and fringe of legs fuscous red, scales smaller and more variable than in *hilaris*, width 0.06 mm. or more, two fifths or more of length, green or bluish green, ♂ sometimes almost scaleless. Elytra greyish fulvous, with or without black margins, or entirely piceous black. 8-9.5 mm. S.-W. Cape **lepidotus** Wiedemann, 1821.
- 24 (23) Hairs on underside and fringe of legs never fuscous red.
- 25 (26) Scales bright emerald green, almost contiguous, round or very little longer than broad, rather variable in size, 0.06—0.2 mm. diam. Long hairs on head and pectus black, on pronotum black and white mixed, elsewhere white. 9-10 mm. S.-W. Cape **smaragdinus** Péringuey, 1902.

- 26 (25) Scales deep or light blue, sometimes greenish blue, less dense, smaller, more uniform in size.
- 27 (28) Scales deep blue above, greenish blue below, shorter and broader. Hairs above mostly black, some very long setae, white, on abdomen and legs greyish white. 7.5—9.5 mm. C. and E. Cape **pauperatus** Péringuey, 1902.
- 28 (27) Scales lighter blue, more elongate, almost twice longer than broad; abdomen of ♂ almost scaleless. Hairs all black. 7.5 mm. E. Cape **elizabethae** Péringuey, 1902.
- 29 (20) Scales on elytra very different in size, less in shape from those on pygidium and abdomen, much smaller or narrower, 0.03 mm. or less broad, often strongly bent, almost rolled up lengthways.
- 30 (38) Scales on propygidium, pygidium and abdomen mostly contiguous or sub-contiguous.
- 31 (35) Mostly bigger, 7-11 mm. S.-W. or W. Cape.
- 32 (33, 34) Whole elytra closely scaly, scales bright golden green in ♂, paler in ♀; fore tibiae of ♂ usually with 2 teeth only. 8.9-5 mm., S.-W. Cape **ditus** Péringuey, 1902.
- 33 (32, 34) Whole elytra closely scaly in ♂, margins closer than disc in ♀; scales emerald green, on propygidium and pygidium mixed with dark golden ones in both sexes; fore tibiae of ♂ with 3 teeth. 11 mm., W. Cape . . . **ditus** ssp. **splendens** n.spp.
- 34 (32, 33) Disc of elytra loosely, margins only closely scaly, scales light blue in ♂, paler in ♀; fore tibiae of ♂ with 3 teeth. 7-8 mm., S.-W. Cape **ditus** ssp. **pseudoditus** Schein, 1959.
- 35 (31) Mostly smaller, 6.6—8.2 mm., Drakensberg.
- 36 (37) Scales different shades of blue, elytra fulvous, margins black in ♂ only. Club of antennae in both sexes about half the length of pedicel. ♂ 6.7—6.9, ♀ 8.1—8.2 mm. **alitocla** n.sp.
- 37 (36) Scales different shades of yellowish green, elytra entirely paler fulvous. Club of antennae in ♂ about $\frac{3}{4}$ length of pedicel. ♂ 6.6—7.4 mm., ♀ unknown . . . **montanus** n.sp.
- 38 (30) Pygidium (except base) and abdomen with a few scales only, scales light blue. Antennae of ♂ very long, pedicel longer than head, club longer than clypeus. 7-8 mm. S.-W. Cape **phillipsi** Schein, 1959.
- 39 (19) Scales small or very elongate, not broader than 0.03 mm., often erect or almost rolled up, on elytra similar in shape and not much different in size from those on pygidium and underside.
- 4 (47) Scales moderately elongate, up to 4 times longer than broad.
- 41 (42) Scales closely set on upper (pronotum partly, elytra, propygidium and pygidium), loosely on underside (pectus, abdomen and legs), green or bluish green (forma typica), green and golden red mixed (f. *aureovariegatus* Schein 1959), or blue, deep or light (f. *jucundus* Blanchard 1850). 9-10 mm., S.-W. Cape . . . **longipes** Linné, 1764.
- 42 (41) Scales mostly loosely set on upper and underside. Basutoland, Drakensberg.

- 43 (44) At least elytra, tibiae and tarsi light fuscous, a few greenish scales on pronotum, some patches of light bluish scales on elytra, and golden green ones, not closely set, on pygidium, abdomen and pectus. 9-10 mm., Basutoland **badiitibialis** Schein, 1959.
- 44 (43) Elytra and legs black, scales light blue, mixed with some golden green ones.
- 45 (46) Scales very loosely set all over. 8-9 mm., Basutoland . . **brincki** Schein, 1959.
- 46 (45) Scales more closely set, but much looser than in longipes. 8-9 mm. Drakensberg. **brincki** ssp. **rudebecki** Schein, 1959.
- 47 (40) Scales (at least on elytra) very elongate, almost hairlike, more than 5 times longer than broad. Black, elytra fulvous.
- 48 (49) Scales pale blue or greenish, very sporadic on upper side, underside almost scaleless. Base of pedicel, nearly the whole fore tibiae and tarsi, middle tarsi and apex of hind tarsi fulvous. Club of antennae very long in ♂, almost as long as pedicel. Hairs black, yellowish on abdomen and fringe of hind tibiae. 8.5 mm. S.-W. Cape **andreaei** Schein, 1959.
- 49 (48) Scales light metallic green or whitish, according to angle of light, rather sparse on disc of pronotum and elytra, also on legs, closer on sides of elytra and on pygidium, rather close and also broader along apical margin of sternites. Teeth of fore tibiae and all the claws dark castaneous. Club of antennae normal, half as long as pedicel. Hairs black above, yellowish on pygidium, underside and legs. 7.5 mm., Drakensberg **setisquama** n.sp.
- 50 (18) Scales milky white, slightly opalescent.
- 51 (52) Elytra black or piceous, hairs above and below all black. Scales restricted to elytra, 4 elongate patches forming a transverse row in apical half. 9.5—11 mm., S.-W. Cape scaly forms of **ursus** Fabricius, 1775.
- 52 (51) Elytra dark fulvous, hairs black mixed with white on elytra (especially near scutellum), underside and legs. Scales sporadic on pronotum and propygidium, on elytra and pygidium some irregular patches. 8-9 mm., S. Cape scaly form of **ursinus** Schein, 1959.
- 53 (1) Without scales.
- 54 (55) Hairs on underside and fringe of legs fuscous red scaleless ♂♂ of **lepidotus** Wiedemann, 1821.
- 55 (54) Hairs never fuscous red, either black, whitish or yellowish.
- 56 (57) Hairs black on sides of head only, elsewhere whitish or yellowish. Black, elytra pale greyish fulvous with narrow black margins, legs fulvous. Clypeus broad, apex parallel, slightly emarginate. 9 mm., S.W. Cape. ♀ only, ♂ unknown **albopilosus** Schein, 1959.
- 57 (56) Hairs mostly or entirely black.
- 58 (59) Body, legs and hairs entirely black. Clypeus narrow, sides straight, apex emarginate. Club of antennae (♂) almost as long as pedicel. 7.5—8.5 mm., S. and E. Cape **nigerrimus** Schein, 1959.
- 59 (58) Legs totally or partly fulvous, elytra black, piceous or fulvous.

- 60 (61) Elytra black or piceous. Black, antennae (except apex of club), palpi, fore legs and middle tibiae light fulvous, colour of middle femora and hind legs varying. Hairs above and below black. 9.5—11 mm., S.-W. Cape scaleless forms of **ursus** Fabricius, 1775.
- 61 (60) Elytra fulvous.
- 62 (63) On elytra (especially near scutellum), underside and legs the long black hairs mixed with white ones. Elytra and hind legs dark, fore and middle legs light fulvous. Club of antennae in ♂ nearly as long as pedicel. 8-9 mm., S. Cape scaleless form of **ursinus** Schein, 1959.
- 63 (62) The long hairs black or brownish, never white.
- 64 (65) Elytra pale greyish brown, suture dark, margins black. At least apex of fore tibiae, fore and middle tarsi brownish. Club of antennae (♂) as long as pedicel. 8-8.5 mm., S.-W. Cape **nasuus** Wiedemann, 1821.
- 65 (64) Elytra entirely fulvous, suture and margins not darker, legs black. Club of antennae (♂) shorter than pedicel.
- 66 (67) Long, erect, strong bristles and shorter, thin hairs, semi-erect towards base, depressed towards apex of elytra, all black. Club of antennae (♂) $\frac{2}{3}$ of pedicel. 8-9 mm., S.-W. Cape **proletarius** Péringuey, 1902.
- 67 (66) Long, erect, black bristles on head and prothorax, the latter with a short, fulvous basal fringe, elytra in basal half with long, erect, dark brown, in apical half with short, depressed, pale brown, propygidium and pygidium with short fulvous hairs. Club of antennae (♂ and ♀) about $\frac{1}{2}$ length of pedicel. 9 mm., Tanzania **bipilosus** Moser, 1918.

DESCRIPTIONS OF NEW SPECIES

1. **Anisonyx alticola** n.sp.

Black, distinctly shining, elytra fulvous (in ♂ edge of suture, basal, lateral and apical margins black). Scales on abdomen fairly big, round, hardly longer than broad, on upper side thinly sprinkled and much smaller, but deeper blue than on propygidium, pygidium, abdomen and hind legs, here much closer, on abdomen scales broader than intervals. Pubescence on upper side double, long, erect, black bristles and short, depressed, light greyish hairs, different in the two sexes, underneath rather dense, long and soft yellowish hairs with a few thin, straight, black ones, legs mostly with black bristles. Clypeus of ♂ attenuate in a straight line from base to apex, here rounded, middle of apex depressed, slightly emarginate, in ♀ more parabolic, shorter and broader than in ♂, longer than club of an ennae in both sexes.

Head of ♂ with lateral bristles long, strong, closely set and bent upwards, of ♀ shorter, thinner and less bent, similar to those of *montanus* ♂, frons and vertex distinctly shining, with shallow punctures, clypeus opaque, finely rugose, one sixth longer than broad in ♂, one tenth in ♀. Genal canthus and anterior part of frons sprinkled with scales, more elongate than elsewhere in ♂, in ♀ more elongate than scales on pronotum, less than those on elytra.

Prothorax broader than long, in ♂ one half to four eleventh, in ♀ about one third, broadest in apical third, impressions in apical half of disc bigger and deeper in ♂ than in ♀.

On disc punctures fairly strong but intervals broader than punctures, hardly punctulate, shining, along apical and basal margins punctures smaller but much closer, intervals opaque, along base closely strigillate. Scales in ♂ deep blue, small, mostly round, forming on each side a marking like a C, usually also a median stripe, sometimes short; in ♀ whitish, opalescent, much bigger, more elongate, more closely set, lateral markings broader, median stripe almost complete. Bristles long, strong, closely set, jet black in ♂, shorter, thinner, mixed with greyish ones in ♀. Base only sharply marginate, apex fringed with light brown, base with light grey hairs.

Scutellum black, rugosely punctuate, with black hairs, in ♀ also a few whitish scales near base.

Elytra with a flat disc, separated from the steep sides by a blunt edge, with three depressions: one short, transverse, basal, between humeral callus and scutellum, deep on the outer, shallow on the inner side, an elongate, triangular, subsutural, shallow, separated from the basal one by a transverse blunt ridge and reaching to the sutural angle, and a narrow, fairly deep groove on the basal half of the sides in ♂; in ♀ they are shallower, the subsutural one divided into a very shallow, transverse one before the middle and a small apical one, the lateral one broader and shallower, especially towards the apex. Scales small, round, deep blue or greenish blue, sprinkled on the disc, denser on the black margins in ♂, in ♀ much bigger, elongate, at least twice longer than broad, whitish, opalescent, closer along margins than on disc. Upright bristles and decumbent hairs all black in both sexes.

Propygidium and pygidium covered with almost contiguous scales, especially in ♂, lighter blue than on upper side, mostly as big as those on abdomen, mixed with some smaller ones, round or slightly elongate. In ♀ whitish, opalescent, but under a certain angle of light pale blue, more elongate and less dense than in ♂. Thickly covered with long, strong bristles, all black, and shorter, thinner, upright hairs, mostly black, some whitish in ♂, in ♀ the pubescence shorter, the black bristles thinner and further apart, the shorter hairs almost decumbent, more whitish than black.

Underside and hind legs also scaly, the scales pale blue or whitish according to angle of light, on abdomen rather close, especially along apical margin of sternites, in ♂ sometimes slightly broader and distinctly more elongate than on pygidium, mixed with some smaller and more elongate ones; in ♀ closer than in ♂, broader, less elongate. Pectus with a few scales only in ♂, as closely scaly as base of abdomen in ♀, scales similar to those on abdomen in both sexes. Scales on hind femora in ♂ smaller and less closely set than on abdomen, in ♀ as big and as closely set; on hind tibiae in ♂ very little more elongate than on femora, otherwise similar, in ♀ much more elongate, especially towards apex, and rather loosely set. Pectus thickly covered with long, soft hairs, pale yellowish in ♂, more whitish in ♀, mixed with a few thin, straight, black ones, abdomen with similar hairs, especially on sides, this pubescence much longer and denser in ♂ than in ♀. Femora with soft, curved hairs, tibiae with straight bristles, in ♂ pale yellowish on hind margin of femora only, elsewhere black, in ♀ black on outer side of tibiae only, elsewhere whitish. Third tooth of fore tibiae in ♂ very blunt.

This species looks somewhat similar to *A. ditus* ssp. *pseudoditus* but is smaller on the average, more elongate, clypeus longer, more attenuate towards the apex, especially in ♂,

head and pronotum more shining, more distinctly punctate, in ♂ with longer and denser black hairs. Scales of ♂ deeper blue, elytra of ♀ without black margins; besides, it was found in the Drakensberg, Natal, in March, while *pseudoditus* is found in the S.-W. Cape from October to December.

Length: ♂ 6.7—6.9, ♀ 8.1—8.2 mm.

Indumeni River headwaters, 8500-9200 ft., 1 ♂, 2 ♀♀ (holo-, allo- and paratype); fire lookout, grassland on steep slopes, 7500-7700 ft., 2 ♂♂, paratypes. Type in South African Museum.

2. *Anisonyx montanus* n.sp., ♂ only

Less shining than *alticola*, elytra lighter fulvous, without black margins, all the claws castaneous, on fore legs also teeth of tibiae and tips of tarsal segments, rest of body black. Scales adpressed, more elongate than in *alticola*, one half or more longer than broad, especially on upper side; more greenish and much closer on genal canthus, sides of pronotum, sides and depressions of elytra, but not on abdomen. Pubescence on upper side mostly black, the bristles shorter, thinner and less bent than in *alticola*, on pronotum rather dense but of unequal length, all erect, the short ones mixed with lighter grey hairs; elytra with double pubescence, the erect hairs sparse in apical half, the shorter, depressed ones also black, longer but much sparser than the greyish hairs of *alticola*. On propygidium, pygidium, underside and legs mostly yellowish white, but the long black bristles prevailing on base of pygidium and outside of tibiae. Clypeus shorter than in *alticola*, little longer than broad, less attenuate in basal, more in apical half, shorter rounded and slightly emarginate at apex, as long as club of antennae; lateral carina low, as in *alticola* ♀.

Bristles on head shorter, thinner, sparser and with a brownish lustre, not deep black as in *alticola*. Whole head distinctly punctuate, intervals mostly narrower than punctures, closely and rather strongly punctulate, less shining than in *alticola*. Scales greenish, little longer than broad, closely set on genal canthus, sparse on base of clypeus, apex and sides of frons, and on vertex.

Prothorax hardly one third broader than long, broadest before the middle, sides here more rounded than in *alticola*, also attenuate to apex and base but distinctly rounded to apex, very little emarginate before the base; disc hardly shining, puncturation much stronger and closer, impressions small and shallow. Scales light bluish green, round, distinctly bigger than on head; lateral markings still broader than in *alticola* ♀, with closer set scales, median stripe usually complete, disc also sprinkled. Basal margin very fine, basal and apical fringe light grey, shorter and denser, especially the apical.

Scutellum rugosely punctate, coarser at base, hairs mostly black, some light greyish at base and apex, and a few scattered scales, similar to those on elytra.

Elytra similar to those of *alticola* ♀, broadest near middle, sides steep in basal quarter only, depressions and ridges less distinct. Scales paler bluish green than on pronotum, round near base, more elongate near apex but not more than twice longer than broad; basal half with a few scales only along suture, margins and in the depressions, apical half rather closely sprinkled all over. Upright bristles of two types, either very long, varying in

thickness, all black, or hardly half that length, thinner, often brownish grey; the decumbent pubescence rather sparse, not close as in *alticola*, but the single hairs much longer and thicker, black.

Propygidium and pygidium covered with almost contiguous, pale bluish green scales, nearly the same size, shape and shade as those on abdomen, less than twice longer than broad. Pubescence long, erect, mostly white, mixed with some longer black bristles; in fresh specimens, these form a distinct brush along the base of the pygidium, in older, rubbed-off ones only the more flexible white hairs are left.

Underside and hind legs also scaly, the scales more greenish than in *alticola*, also broader and slightly more elongate, the distribution similar, except on sternites; here the apical margin always closely scaly, on the rest of the segment the number of scales increases from base to apex, the first has a few scattered scales only, the last is rather closely scaly all over. Pectus closely scaly, hind legs like those of *alticola* ♂. Pubescence mostly whitish, long, soft, mixed with a few thin, straight, black hairs, but black bristles on outside of tibiae. Third tooth of fore tibiae obtuse but distinct.

This species is closely related to *alticola* and *ditus*, less to *phillipsi*; it agrees with *ditus* and *alticola* in shape, size and distribution of scales, has also pygidial part and abdomen more or less covered with subcontiguous metallic scales, but is easily distinguished from both by the thick, soft, almost white pubescence of the underside, and the much longer antennal club of the ♂, which is still considerably shorter than in *phillipsi*; besides, *phillipsi* has scattered light blue scales only on pygidial part and underside, and here the pubescence is darker, light greyish brown. It is also bigger on the average (7-8 mm.), and the third tooth of the fore tibiae in the ♂ is hardly indicated.

Length: ♂ 6.6—7.4 mm., ♀ unknown.

Indumeni River headwaters, 8500-9200 ft., 6 ♂♂, holo- and 5 paratypes; fire lookout, grassland on steep slopes, 7500-7700 ft., 1 ♂, paratype. Type in South African Museum.

3. *Anisonyx setisquama* n.sp.

A somewhat problematical species, represented by a single ♀ specimen. According to shape and pubescence of the head, pubescence of the prothorax and shape of the tarsi it is a ♀, and as it was found together with *montanus* ♂, has exactly the same coloration, a similar microsculpture and also the size of a big ♂, I first took it for *montanus* ♀, but when I noticed that in shape of prothorax and pygidium this ♀ agrees completely with *montanus* ♂, while in all the other species known these parts show sexual differences, and that the scales are entirely different, a type so far known from *andreaei* ♂ only, I came to the conclusion that it must be a different species, but more material is required to prove it beyond doubt.

Head and prothorax distinctly less, elytra slightly more shining than in *montanus*, but much less than in *alticola*. Scales partly half erect, on elytra very narrow and elongate, almost hairlike, 5 times and more longer than broad, whitish or greenish, according to angle of light, much sparser all over. Pubescence also mostly black on upper side, here and on underside too thinner, shorter and sparser than in *montanus*, hardly any black bristles on underside and legs. Clypeus short, as long as broad, strongly attenuate from insertion

of antennae to apex, here rounded on the sides, truncate, and depressed, but not emarginate in the middle, lateral carina low, upper side rather closely and strongly cicatricose punctate; pubescence black, upright, shorter and sparser than in *montanus*.

Rest of head, except upper part of frons, much closer punctate than in *montanus*, intervals mostly narrower than punctures, the black pubescence shorter and sparser. Club of antennae much shorter than in *montanus*, not longer than articles 3 to 7 together, or five-eighths length of pedicel. On genal canthus, upper part of frons and vertex some decumbent white hairs, on frons and vertex shorter than the upright hairs, on genal canthus very short, replacing the scales which are entirely lacking on head.

Prothorax very similar to that of *montanus*, sides a bit less rounded, not emarginate before the posterior angles, punctures smaller and wider spaced, intervals broader, their puncturation similar, reticulation finer, disc more shining. Scales strongly elongate, mostly about four times longer than broad, whitish or pale bluish green, according to light, almost restricted to apical third, here thinly sprinkled, closer only near anterior angles, very few scattered along base. Hairs on disc black, also lateral fringe, shorter, thinner and looser, apical and basal fringe greyish white, shorter, but (at least the apical) closer than in *montanus*. Depressions shallow, base finely marginate.

Scutellum opaque, closely and finely reticulate, without scales, apical half with small, shallow punctures, each bearing a rather long yellowish white hair.

Elytra similar to those of *montanus*, broadest near middle, depressions and ridges hardly distinct. Scales more whitish than on pronotum, very elongate, hairlike, five times and more longer than broad, in basal part only outside the humeral callus, along apical margin almost extending to the sutural angle, rather thinly sprinkled except along margin. Very few long erect hairs, thin and white, no shorter erect hairs, the decumbent ones longer, thinner and sparser than in *montanus*, black on disc, a few whitish along margins, especially near apex.

Propygidium and pygidium sprinkled with scales similar to those on abdomen, bigger but less elongate than those on elytra, about four times longer than broad, on propygidium restricted to middle and sides, more equally distributed on pygidium. Pubescence mostly white, strongly inclined backwards, almost decumbent, mixed with some thin black bristles, slightly longer and more erect, much sparser than in *montanus*.

Abdomen and hind legs with scales more variable in size and shape, in size resembling the bigger ones on the pygidium, but often just as elongate as those on the elytra. Sternites 1 to 4 with one rather loosely set row along the apical margin, 3 and 4 also with a group on the sides, on the rest of the segment a few solitary scales only, sternite 5 loosely sprinkled all over. Pectus without scales, apex of hind femora and base of hind tibiae with a few very elongate ones. Pubescence much sparser and more light brownish than in *montanus*.

This species, although in shape and coloration very similar to *montanus*, differs from all the other species, except *andreaei* Schein, by the shape of the scales which are very elongate, almost hairlike. From *andreaei* it differs by smaller size, more elongate shape, shorter, more attenuate, not emarginate clypeus, narrower, shining prothorax, light green, metallic scales, less dense and lighter pubescence, especially on the underside.

Length: 7.4 mm.

Indumeni River headwaters, 8500-9200 ft., 1 ♀, holotype. In South African Museum

4. *Anisonyx ditus* Pér. subsp. *splendens* n.ssp.

Bigger than the typical form, scales on upper side more bluish green without golden lustre, a proper emerald green, in ♀ hardly paler than in ♂, on propygidium and pygidium mixed with numerous dark golden ones. Clypeus slightly broader than in the typical form, not longer than broad in ♂. Disc of elytra rather light fulvous, margins dark, scales along margins in ♂ only slightly closer than on disc, in ♀ much closer. Long white hairs a bit more numerous, especially in ♂. Third tooth of fore tibiae in ♂ obtuse but distinct.

This form has the robust shape and the peculiar coloration of *A. longipes* L. f. *aureo-variegatus* Schein, but the scales (shape, size and distribution) show beyond doubt that it belongs to *A. ditus* Pér.

So far no *Anisonyx* had been found north of Sneeuwgat valley, Tulbagh district—Pakhuis Pass, Clanwilliam district, is 100 miles further north, not far from the northern limit of the Cape flora, and another indication that the genus *Anisonyx* may originate from the winter rainfall area, the homes of perennial shrubs with hard foliage, and is one of the typical Cape macchia forms.

Although some species are confined to high mountains, the genus is obviously not an old relic but comparatively recent; the highly specialised mouthparts, suitable for sucking liquid food, and the great number of closely related species within a small area, the south-western Cape, both point in this direction..

The beetles are found on the flowers of plants belonging to quite a number of different families; it may be accidental that the geographical distribution of the genera *Anisonyx* and *Protea* (a typical shrub of the Cape macchia) in the Cape Province is practically the same: 22 species are recorded from the Cape, of one (*A. senilis* Burm.) no exact locality is known, one (*A. depauperatus* Pér.) is found partly inside, but mostly outside, and only one (*A. elizabethae* Pér.) entirely outside the area of *Protea*.

Length: 11 mm.

Pakhuis Pass, Northeast of Clanwilliam, Sept. 1961, S.A. Museum's Expedition. 1 ♂, 1 ♀, holo- and allotype. In South African Museum.

REFERENCE

SCHEIN, H., 1959. Die südafrikanischen Pachynemini (Col., Hopliini). *Ent. Arb. Mus. Frey* 10 (1): 1-150.

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